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NASA AIR TRAFFIC MANAGEMENT TOOL WINS SOFTWARE OF THE YEAR AWARD

NASA software designed to help improve the safety and efficiency of the national airspace system has been recognized for its innovation and significant contributions to science and technology.

The Future Air traffic management Concepts Evaluation Tool (FACET), developed at NASA Ames Research Center, Moffett Field, Calif., was selected as NASA's 2006 Software of the Year. FACET is a flexible software tool that provides powerful simulation capabilities and can rapidly generate thousands of aircraft trajectories to enable efficient planning of traffic flows at the national level.

"I'm absolutely thrilled that the Ames team has been honored with this prestigious award," said NASA Ames Center Director S. Pete Worden. "As a center, we have enjoyed tremendous success in previous NASA Software of the Year competitions; this award adds to our proud legacy and is a harbinger of great things to come for our center."

FACET uses actual air traffic data from the Federal Aviation Administration (FAA) and weather information provided by the National Oceanic and Atmospheric Administration (NOAA) to analyze the flight plan route and predict trajectories for the climb, cruise and descent phases of flight for each aircraft type. According to NASA Ames engineers, the analyses of these trajectories drive the various air traffic management applications. This innovative feature enables FACET to model airspace operations at the U.S. national level, and process more than 15,000 aircraft on a single desktop or laptop computer. For the commercial airline passenger, this holds the promise of more frequent on-time departures and arrivals.

"FACET started out as a simulation tool for NASA research and has evolved into an operations planning tool for the FAA and airlines," said NASA Ames' Banavar Sridhar, FACET team lead. "I would like to thank our colleagues for supporting and contributing to this successful endeavor."

FACET has transitioned successfully from NASA laboratory theoretical use to national

operational use. Technologies derived from FACET have been incorporated into the FAA's traffic management system, which is used currently by more than 500 air traffic managers at approximately 100 sites nationwide. NASA has commercially licensed the FACET software to Flight Explorer®, Washington, a leading vendor of flight operations management tools that are used by nearly 5,000 dispatchers at more than 600 customer sites including 80 percent of major United States airlines. FACET is a component of a growing suite of air traffic management tools developed at NASA Ames as part of the NASA Airspace Systems Program at NASA Headquarters in Washington.

The Software of the Year Award developed by the NASA Inventions and Contributions Board recognizes outstanding contributions in software development. Selection is based on a rigorous set of criteria including the software's significance to science and technology, its impact on NASA's mission, quality, usability, extent of potential use and innovation. All software must be licensed and commercially available.

"Making NASA mission technologies applicable and available to meet the needs of the American public, industry and academia increases the value added from the taxpayer's investment in the US space program," said Robin Orans of the Technology Partnerships Office at NASA Ames. "The licensing of FACET is helping make air travel safer and more efficient by saving fuel for airlines and time for passengers from gate to gate."

The official awards ceremony will be held at NASA Headquarters in early September. Additional FACET team members honored by this award are Karl Bilimoria and Shon Grabbe (NASA); and, Kapil Sheth, Gano Chatterji and Daniel Mulfinger (University of California-Santa Cruz).

For more information about FACET, visit
http://as.nasa.gov/aatt/facet.html
http://technology.arc.nasa.gov/SOY2006/SOY_FACET/index.cfm

For more information about NASA's Aeronautics Research Mission Directorate, visit:
http://aeronautics.nasa.gov